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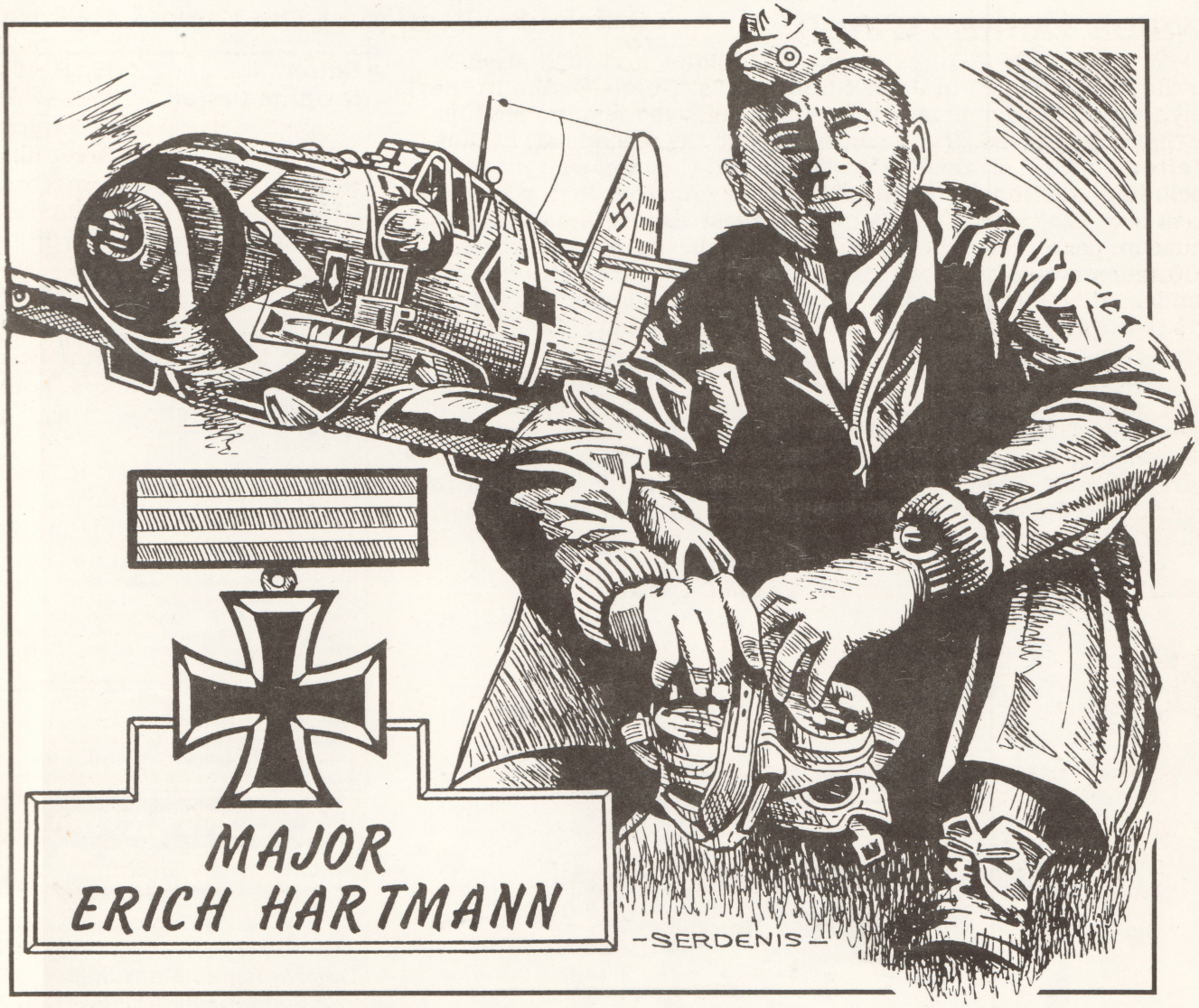
Yankee WINGS

THE MAGAZINE OF THE YANKEE AIR FORCE



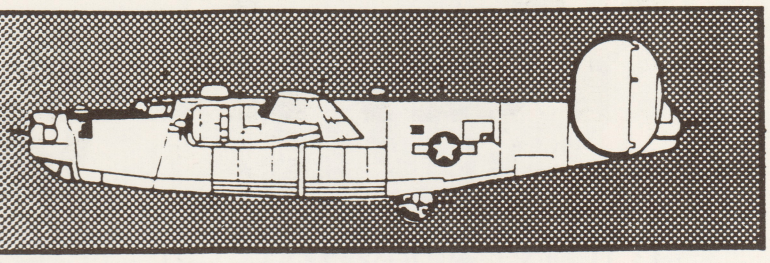
YANKEE AIR FORCE

Also in this issue...

- **Fokker D-VII**
- **Restoration of *Yankee Lady***
- **Airships: Gentle Giants of the Sky**
- **YAF Annual Awards**

...and more!

Yankee WINGS



INSIDE YANKEE WINGS

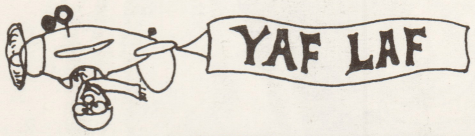
Official Publication of The Yankee Air Force©

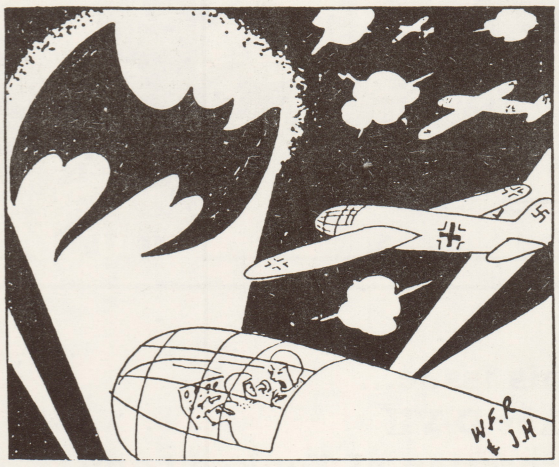
This issue features coverage of blimps and rigid airships in the United States in **Jack Stankrauff's** "Gentle Giants in the Sky", which is complimented by photos of some historic airships in the center spread. The issue opens with the second part of **Dick Melton's** article on the Fokker D-VII, and the man who made it, including additional line art and photos. Another item you may pass over is the Air Force Museum guest lecture series on the museum page. Yes, it is unfortunate that these great speakers are 200 miles away, but if you think about it - where can one find similar talks that are closer? Consider combining the talk with a trip to the museum, perhaps even with a friend, and I'll wager that you'll be amply rewarded!

Organization news includes the 1989 YAF Airman of the Year and other awards, as well as estate planning for YAF members. Three new writers debut in this issue: **Brian Rogers** is now writing the column on Museumology, and **Don Burke** and **Earl Hewett** will do the same for B-17 reports. I also wish to thank **Stan Reich,** who feels it's time to pass along the calendar, which he has so faithfully kept.

All in all I think we have another good issue. If you have thoughts about *Yankee Wings*, I'd like to hear them.

- *Jim Hanford*





ACHTUNG! NOW VE HAFF BIG TROUBLE.

ON THE COVER

Artist Jim Serdenis has captured the likeness of Luftwaffe fighter pilot, Eric Hartmann, the leading ace of all time with 352 official victories. After the war, Hartmann spent 10 years in Soviet prison camps, after which he played a role in the new Luftwaffe. An excellent book is his biography by Trevor Constable, *The Blonde Knight of Germany*, which is still available.

Editor.....Jim Hanford
Graphic Design.....Dick Melton
.....Linda Tereniak
Advertising.....Soren Kalen
Staff.....Graham Armstrong, George Binson, Chuck Buehner, Don Burke, Todd Hackbarth, Earl Hewett, Randy Hotton, Norm Jones, Toni Koski, Charlie Lingenfelter, Dennis Norton, Robert Pauley, Lana Presley, Stan Reich, Brian Rogers, Jack Stankrauff, Sam Sturgis, John W. Syler, Paul G. Tardiff
Director.....John R. Snider
Distribution.....Charles and Joann Lingenfelter, Dean and Jeanne Green, Soren Kalen

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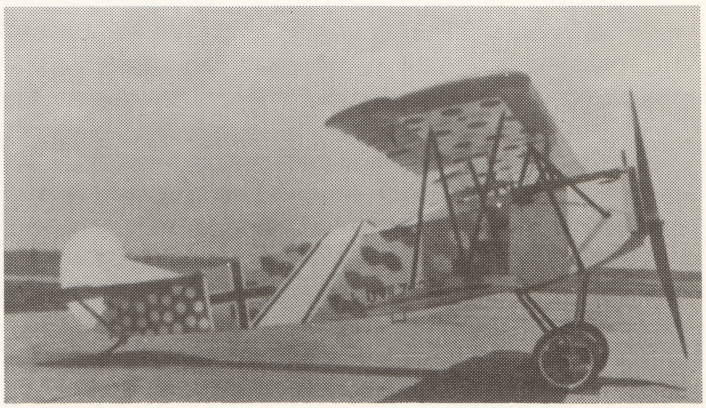
FOKKER D-VII:

The Plane and the Man Behind It

Part Two



by Dick Melton

Fokker's First Biplane Fighters

Fokker next turned his attention to developing a biplane fighter, an aircraft type that his competitors were building. Although the Fokker D-series biplanes would culminate in the outstanding D-7 of 1918, the earlier models were less than impressive. The Fokker D-2 arrived at the front in the summer of 1916. The Fokker D-3 was flown by German ace Oswald Boelcke for several weeks in 1916 before he changed to an Albatros D-2 fighter. And the Fokker D-5, tested in October 1916 and first delivered some three months later, was a somewhat sluggish fighter that saw only minor service. With the exception of the D-5, these early Fokker biplanes were outperformed by the competing Albatros aircraft and others as well. But Fokker was building a team of designers . . . and that team was gaining valuable experience.

The Fokker Dr-1 Triplane

Early in 1917, a different form of fighter appeared in the skies over western Europe as Britain moved to regain aerial supremacy over the front by introducing the Royal Naval Air Service's Sopwith Triplane to combat. Most famous of the Sopwith "Tripe" pilots was ace Raymond Collishaw who led the "Black Death" flight of No. 10 Squadron, RNAS. In a 27-day period, Collishaw alone destroyed 16 enemy planes. And in a three-month period, the six members of the "Black Death" flight destroyed 87 German planes while losing only one pilot.

Germany's almost complete dominance of the air was lost . . . and Germany was panicked into launching a massive triplane fighter development effort in response – an effort which, with one exception, was a dismal failure. Albatros, Pfalz and others competed for the contract which Fokker won with the D-6 prototype. In production, the plane was designated as the Dr-1 and only 320 were built.

Designed primarily by Fokker's chief designer, Reinhold Platz, the Dr-1 had cantilever wings that required no bracing wires, and a fuselage structure of welded steel tubing. It was powered by a 110 horsepower Oberursel nine cylinder rotary engine (a copy of the very successful French Le Rhone rotary engine), thanks to Fokker's fore sight in buying the Oberursel firm to keep his competitors from using the same engine.

The plane was small – less than 19 feet long with a wingspan of about 23 1/2 feet – and weighed less than 1,300 pounds with a full load. Many authorities, including the Red Baron, Manfred von Richthofen, considered it the most maneuverable plane in the air although its extreme sensitivity made it tiring to fly. Von Richthofen dropped his long-standing allegiance to the Albatros line of fighters and switched to the Fokker Dr-1 after being shot down and seriously wounded in a fight with a two-place British pusher biplane on July 6, 1917.

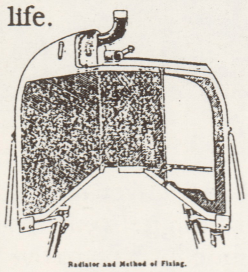
The Dr-1 put Fokker back on top as Germany's leading aircraft designer. Put into production in July of 1917, it scored its first victory on August 10 and became the Red Baron's plane upon his return to action in November. But the triplane craze soon ended and the Dr-1 was withdrawn from combat service in May 1918. Von Richthofen lost his life in a Dr-1 triplane on April 21 after scoring a record 100 confirmed victories.

The Fokker D-7

Fokker next turned his attention to the competition for a single-seat fighter to be powered by the 160 horsepower Mercedes-Daimler D-IIIa engine. The first of two prototypes was first flown in December of 1917. However, Fokker was dissatisfied with the prototype's directional control. On the night before the competition, he hired welders to splice in additional fuselage structure to stretch the plane's length and give the rear control surfaces more effect – strictly against the rules

of the competition!

Von Richthofen flew the prototype the month of the competition and was highly impressed, asking that his squadron be equipped with the D-7 when it went into production. But although the D-7 made its first appearance at the front in April of 1918, von Richthofen never had the opportunity to take it into combat before he lost his life.



Radiator and Method of Fixing.

The Fokker D-7 incorporated some of the innovative features introduced by Reinhold Platz in the triplane. The fuselage structure was of wire-braced welded steel tubing. It had thick high-lift cantilever wings that needed no exterior supports. Thin, delicate-looking N-shaped struts were used between the upper and lower wings more to instill confidence in the pilots who flew the D-7 than for structural purposes. Another triplane feature carried over into the D-7 was the airfoil-shaped fairing around the axle – actually a small wing that added lift.

The Mercedes-Daimler D-III engine was a water-cooled, overhead cam, inline six-cylinder engine of advanced design for its time. The basic design displaced nearly fifteen liters (over 900 cubic inches) and had a 4.5-to-1 compression ratio. Cylinders were individually made of machined cast steel and surrounded by integral water jackets. Each cylinder had a bore of slightly over five and a half inches (140 mm) and the stroke of the two-piece pistons (a cast iron skirt on a forged steel head) was about six and three-tenths of an inch (160 mm).

A two-piece aluminum crankcase had seven integral main bearings to support the crankshaft and a small glass window in one side to permit the pilot or mechanic to check the oil level before flight. The engine also had a manually operated compression release that reduced compression by half to make the engine easier to crank for starting. As soon as the engine fired, the ground crewman would lock the release to restore full compression for normal operation.

The D-III's version featured a slightly increased compression ratio and other improvements. It turned out 160 horsepower for takeoff and 180 horsepower at 1,000 meters (3,280 feet).

Although this engine provided the incentive to develop the Fokker D-7, Anthony Fokker preferred the slightly more powerful 185 horsepower BMW powerplant which was used in a great majority of the D-7s that saw combat. These versions bore the designation, D7F.

The D-7 was armed with two 7.92 mm. Maxim "Spandau" machine guns firing through the propeller arc, each having 500 rounds of ammunition – typical armament for that period and for many years to follow. Its single fuel tank, mounted just ahead of the instrument panel, held 95 liters (25.1 U.S. gallons). All control surfaces were aerodynamically balanced to reduce control forces and increase responsiveness, and only the top wings had ailerons. It had a service ceiling of 19,600 feet and could climb to that altitude in about 18 minutes. Its top speed was about 116 mph, according to one reputable authority (although another source gives it as "125-130 mph in level flight.").

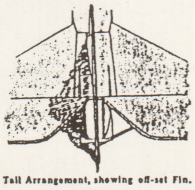
During the remainder of the war, Fokker built 861 D-7s and Albatros built at least that many more under license for a total of over 1,700 produced. By July of 1918, only three months after it arrived at the front, 80 percent of Germany's fighter squadrons were equipped with the Fokker D-7. One squadron using the plane scored a remarkable 81 kills in a six-day period in September.

An indication of the respect earned by the Fokker D-7 was the fact that it was the only airplane named in the terms of the Armistice. Germany was ordered to surrender its entire stock of D-7s to the Allies. The U.S. Air Service brought back 142 of them and they served as one of our nation's first-line fighter aircraft until the mid-1920s. They also served on the rosters of other air forces, in some cases until the mid-1930s.

A Fokker D-7 Pilot Report

Movie stunt flier and former Naval aviator Frank Tallman wrote his impressions of flying a restored Fokker D-7. "In taking off, the tail comes up immediately, with complete rudder control. What a completely responive airplane! The ailerons are sheer delight and the climb out is a revelation.

"Stalls are straightforward. Loops cover about 800 feet of sky and when started at 120 mph carry through beautifully with no tendency to fall out at the top. The full slow roll is in the order of nine seconds. Spins . . . are smooth and precise in either direction.



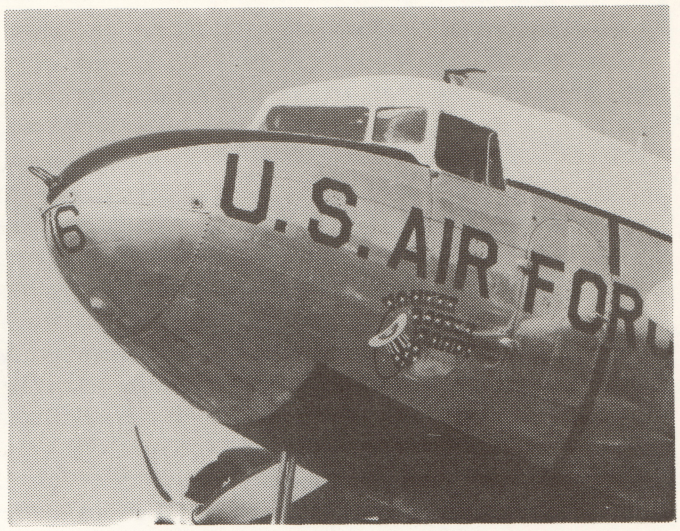
Tail Arrangement, showing off-set Fin.

"As you come in (for a landing), you'll find the D-7 moving quite a bit faster than you anticipated and touching three points about 55 mph. As you taxi in . . . (you) realize that the Germans were as far ahead with this airplane in World War I as they were in World War II with their operational jet aircraft and V-2 rockets."

(continued on page 19)

Dennis Norton Recalls;

The Restoration of *YANKEE DOODLE DANDY*



When the Yankee Air Force took possession of the C-47 from ERIM, on our first Founders Day in September 1982, the aircraft had not been flown in over two years. Therefore, first and foremost, **Ron Havilland** and crew had to make her airworthy again. At about this time a member who had been hanging around the fringes, and who was to become the prime factor in putting the C-47 back in the air, (and later the B-17) fell in love with our airplane. **Fred Lockwood** had worked for North Central Airlines (later Republic Airlines, and later Northwest Airlines) during the time they were flying DC-3s. When Fred asked me in the fall of 1982 if we needed help restoring the C-47, he mentioned that he'd always felt that after all those years working on DC-3s for North Central, he'd figured that if he *never* worked on one again he'd be perfectly content. However,once a round engine gets into your blood, it's hard to ever get it out. Fred was that way and the more he looked at our C-47, the more he liked what he saw. He volunteered to work on the crew for Ron and before long took over as the head of the restoration crew, leaving Ron to work on paperwork. Later, as Ron became too busy to devote enough time to the horrendous job of recertification, Fred in turn took that over also. So, between Ron Havilland and Fred Lockwood, a crew was pulled together, ERIM and Zantop Airlines were solicited for help, and the restoration began.

First, we had to find out what we had. What the crew found was that we had acquired a very sound aircraft with very low total time, about 14,400 hours on the airframe, 1100 hours on one engine and 160 hours on the other. Basically the aircraft was in very good shape. However, a number of factors pointed to a very major job getting her back in the air.

1) The aircraft, which was a C-47 D with Pratt & Whitney 1830-90D engines of 1200 hp, had never been converted to civilian use, and was licensed in a Restricted Category. If we were to use her for museum flying and for all the other things we wanted to do with her, we'd have to convert her to a DC-3 and license her under FAR Part 91. (She actually became a DC-3 S4C4G and is the only aircraft in existence with that designation because a new designation had to be devised for her.) This would be no small task.

> "...once a round engine gets into your blood, it's hard to ever get it out."

2) The fact that she had not been flying for a period of time necessitated a full airframe and engine inspection, with much overhauling, repair and replacement. This would also be a major undertaking.

3) A complete maintenance and operations manual would have to be written, as none existed at the time.

4) ERIM had used the aircraft for aerial survey work. Part of that work had required that a large hole be cut in the rear belly of the aircraft so that windows could be installed. In addition, an auxiliary power unit had been installed, necessitating a hole in the starboard side of the fuselage for an exhaust stack. We would have to rebuild both areas. This required that we locate an aircraft structural engineer licensed to draw up the engineering drawings and to supervise the actual rebuild of the rear of the aircraft, and someone who would do the work for free. We also had to find qualified workers for the actual rebuild.

5) Lastly, the FAA would have to be convinced that we as a group had the maturity and had enough properly qualified people to safely handle both the rebuilding and the recertification of the aircraft, as well as the later operation of it as a flyable museum aircraft under the unrestricted Part 91.

As you can readily see, what we had undertaken was a major, major operation. There were many who doubted our ability to do it, but with people like **Fred Lockwood, Ron Havilland, Charlie Greenwald, Bill Ray, Bill Gray, Ellen Kurath, Larry Silver** and others who'll be mentioned later, and help from our many corporate friends around the airport, I had all the confidence in the world that we could really pull it off.

...and so we began.

TALE SPINS

Gentle Giants Of The Sky

By Jack Stankrauff

An argument immediately arrises as to the origin of the word, "blimp". One school of thought holds that it is a contraction of the British aircraft nomenclature: "Balloon, Type B, Limp". But research discloses that this specific type never existed. The now widely-accepted view is that of Commander A.D. Cunningham, commanding the British Air Station at Chapel, snapped his thumb against the outer fabric of the SS-12 airship in 1915. He spoke the sound he'd just made with his thumb, - "blimp".

Dirigere

The genesis of lighter-than-air powered airships was the rigid-framed Zeppelins. Count Ferdinand Von Zeppelin first flew his LZ-1 in July 1900 near Friedrichshafen, Germany. Later model Zeppelins, which used hydrogen gas for lifting force, became regularly-used aerial weapons in World War I. Eventually the Allies built and flew dirigibles (from the Latin, dirigere: "to direct") during WWI. These were semi-rigid; ie, having a metal keel surrounded by a helium air cell. The British also used over 200 blimps, defined as non-rigid, because the only rigid part was the gondola mounted with the engines at the bottom of the envelope, for convoy escort, anti-submarine warfare and for reconnaissance.

In the post war period many world powers including Britain, the United States, Italy and Germany, began developing rigid and semi-rigid airships with frequent bad results, especially during storms. During the 1920's and 1930's, the United States Navy built and flew several dirigibles which went down due to their structural instability in bad weather. Despite these ill-fated results, Germany flew its zeppelin fleet (the *Hindenburg* and *Graf Zeppelin*) into the thirties with enviable safety records despite the fact that they were filled with highly flammable hydrogen gas. Then the zeppelin Hindenburg's crash on May 6, 1937 at Lakehurst, New Jersey, sounded the death knell for Germany's dream of global airship flights. The United States had an absolute monopoly on the non-flammable helium gas and kept control of it.

Blimps In The U.S.

The use of blimps in the United States began when the Goodyear Tire and Rubber Company purchased key zeppelin patents after the Count's death in 1917, and the Goodyear-Zeppelin Corporation subsidiary began producing blimps. In 1925, Goodyear's first commercial blimp, the *Pilgrim*, flew. In 1928 and 1929, the *Puritan*, *Vigilant*, *Mayflower*, *Volunteer*, and *Defender* made their aerial debuts. They were later used during World War II as trainers.

After Pearl Harbor, Goodyear-Zeppelin built blimps for the Navy. Most blimp aviators were trained in the L ships and flew anti-submarine patrols and as convoy escorts in the K ships. Primarily used as convoy escorts and for detecting enemy submarines, 150 blimps in 15 airship squadrons served in the Atlantic, Pacific and Mediterranean. Never was a surface vessel under blimp escort lost to an enemy submarine.

Only one blimp was lost to enemy action. On July 18, 1943, K-74 attacked a surface German U-Boat off the coast of Florida. The airship was downed by the submarine's machine gun fire.

Ghost Ship

During World War II, the Navy blimp L-8 departed on routine anti-submarine patrol from its base at Moffet Field, California. An hour out, the ship's crew radioed that they were investigating an oil slick in the ocean. Later that day, the L-8 was found bumping against a seaside cliff south of San Francisco. As a rescue party neared the ship, it drifted inland and came to rest in the middle of Daly City, California. The blimp was completely empty, and no clues were found as to what happened to its two crewmen. Fearing that the two flyers were trapped inside the blimp's helium envelope, Daly City volunteer firemen cut it open, but found nothing.

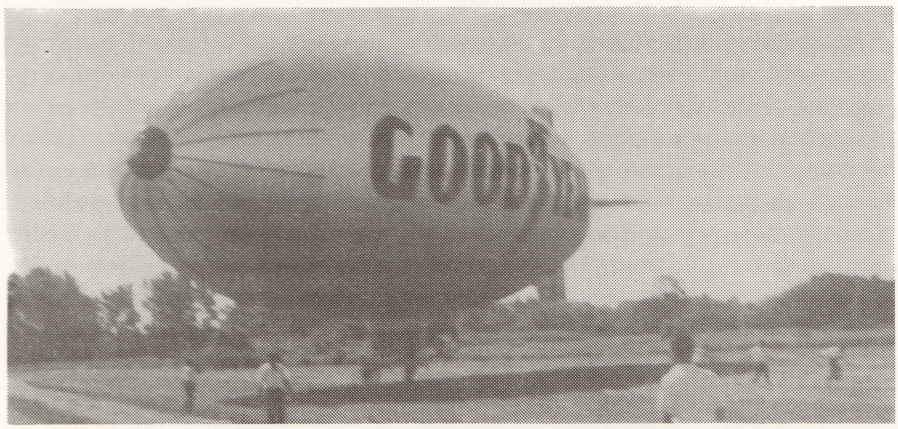
Post World War II Service

Many innovative uses of blimps were tested after the war ended. In 1946, the Navy's XM-1 blimp set a flight duration record of 170.3 hours. Five years later, the enormous XPG-1 blimp took to the air followed by the ZPG-2 type in 1953 with the envelope capacity of 875,000 cu. ft. of helium. The purpose was to expand the Navy's blimp anti-submarine capability to include long-range patrolling as well as in-flight refueling and maintenance.

Using a PO-2W surveillance radar system with a revolving antenna, the ZPG-3 could fly missions lasting one week. Powered by two 1,525 hp Wright Cyclone engines, the ZPG-3s had a maximum speed of 90 mph. These blimps had an overall length of 403 feet, a crew of 25, and a buoyant volume of over 1.5 million cu. ft. of helium.

On March 4, 1957, the Navy blimp *Snowbird* left South Weymouth, Massachusetts and set an endurance record of 264 hours (eleven days) which still

stands today. The *Snowbird* flew from South Weymouth to Africa and landed at Key West, Florida without refueling and performing all maintenance while aloft. *Snowbird* Commander Jack Hunt was decorated with the Distinquished Flying Cross and received the 1958 Harmon Trophy. This dramatic airship era ended in 1962 when the Navy terminated its blimp operations permanently. Yankee Air Force members who served in the Navy blimp units include **Bill Lary, Fred Lockwood** and **Charlie Lingenfelter**.



The latest Goodyear blimp, The Spirit of Akron, approaches a landing at the Ann Arbor Airport after the 1989 Michigan-Notre Dame football game. (Author)

Amazing Machines

Echoic of the by-gone days of the great airships, today's blimps draw excited gazes from blimpophiles of all ages. Goodyear now flies three GZ-20 blimps (*Enterprise, Columbia* and *America)* all over this country for public relations visits and to cover sports and other public interest events. The *Europa* blimp is based in Europe and does the same there. Despite the fact there are other commercially-sponsored blimps including Fuji, Anheuser Busch, and Red Coat Cargo, Goodyear's blimps have probably made more visits to the southeast Michigan area – especially Ann Arbor – than any other airship. The GZ-20 class blimp has a length of 192 ft., width of 50 ft., height of 59.5 ft., with an envelope volume of 202,700 cu. ft. and a maximum gross weight of 12,480 lbs. Powered by two 210 hp, fuel-injected, air cooled engines equipped with two constant-speed 78 inch propellers, the GZ-20s fly at a cruising speed of 50 mph. (Note: A blimp's engine propellers are mounted backward to push rather than pull with their propellers.) Its operational altitude varies from 1,000 to 3,000 feet with a service ceiling of 10,000 ft. The 22.75 ft gondola is constructed of aluminum over a welded steel frame carrying a pilot and up to six passengers. Its tail configuration is a cruciform. The GZ-20's envelopes are neoprene-impregnated polyester two-ply fabric. These blimps can entertain during the night with their 7,560 lights. These lights, which are similar to auto tail lights, are covered with green, red, blue and yellow discs which are controlled with an on-board computor which reads a tape for each message, and/or design and even cartoons! Like many of its predecessors, the GZ-20s have a fixed landing gear. The average yearly operating cost of a Goodyear blimp is over $1.6 million. Purchase cost? Most are not for sale, but if you had around $5 million, you'd be close. Incidentally, a blimp does not have a kitchen or a toilet aboard.

Goodyear's newest flag ship is the GZ-22, *Spirit of Akron*, which paid a visit to Michigan in September to cover the U. of M. - Notre Dame football game. The *Spirit of Akron* uses the latest high-tech equipment, and is propelled by two ducted fan, 250-B17C turboprop, 420 hp engines, with Hartzell ducted 3-blade tractor vectorable propellers, enabling this ship to take off vertically with a maximum speed of 65 mph. It's night sign has 8,064 lights. The GZ-22 is larger than its companion ships: length:205.5 ft., width: 47 ft., volume: 247,000 cu. ft., and a maximum gross weight of 15,000 lbs. With a cruising speed of 35-40 mph, the *Spirit of Akron* can reach an operating altitude of 10,000 ft. Its 34.75 ft. gondola is constructed of aluminum heat-shrinkable polyester fabric covered with polyeurothene paint with a neoprene-impregnated fabric 2-ply envelope. Its tail is in the "X" configuration. It carries nine passengers with a pilot, and has a retractable landing gear.

Maintenance

For general blimp maintenance, helium is added as required and usually purified once annually. If a blimp's envelope becomes porous due to aging, greater amounts of helium must be added. It takes, on the average, two hours to fill a blimp's huge envelope with helium.

Instrumentation Aboard

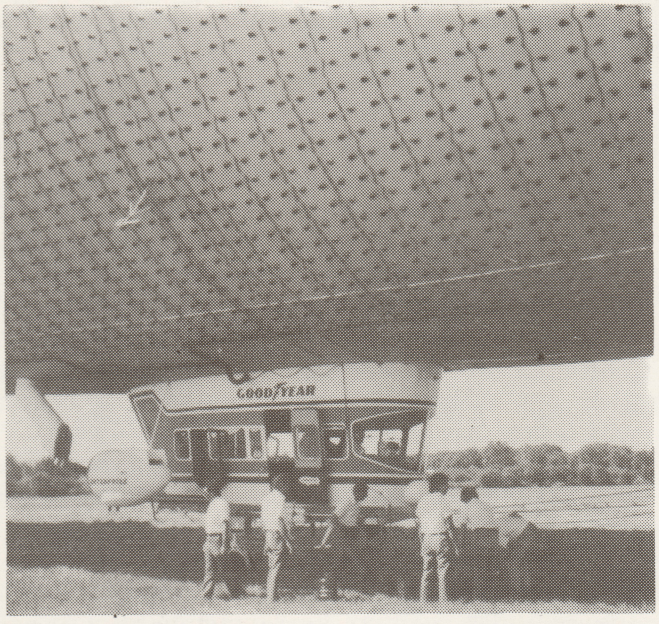
FAA-approved instrumentation carried aboard the Goodyear blimps includes two Collins 360 - channel navcom radios, standard instrument gauges (as a light plane's), color weather radar, a transponder for radar identfication, two manometers for monitoring helium envelope pressure and a helium temperature gauge.

Crewed by qualified specialists, each Goodyear blimp travels with a fleet of ground support vehicles (one bus, a tractor-trailer truck and a van). Five pilots and sixteen riggers, mechanics, electronics technicians,

and a public relations representative round out the usual crew while on the road. While the blimp is in flight to the next stop, continuous radio communication is maintained.

Eye In The Sky

Whether it's a University of Michigan football game or a Michigan International Speedway race for ABC — or for that matter — any event nationwide, Goodyear blimps provide coverage with the new Gyrocam 360 television camera suspended below the gondola. A microwave transmitter sends the camera signal to a ground dish antenna mounted on the television network's control truck. The blimp pilot listens for cues from the show's director for the blimp's next position to get that all-important action shot.



Details of the gondola and lighting array on *The Spirit of Akron*. (Author)

Flying A Blimp

After the pilot checks the blimp's weight, if necessary, the ground crew can add or remove 25-pound shot bags from a compartment in the gondola. Then, if everything is "GO", the ground crew bounces the ship down on its wheel and tosses it into the aloft like a giant medicine ball. (Depending on the payload, the buoyant blimp weighs only a few hundred pounds.) The pilot then opens the engine throttles for momentum and thrusts and climbs to altitude (usually around 1,000 feet.). All flying maneuvers (climbing, diving and cruising) are done at around 35 mph. You'll never see a blimp violently maneuvering. In fact, blimps are the only aircraft certified for flight which do not require a seat belt. Consequently, a blimp's aerial movements are slowly ponderous and, as any blimp pilot will tell you, totally at the mercy of air currents, gusts, windshear, and thermals. A good stiff tail wind can send the behemoth scooting along at 70 mph. It takes a blimp a long time to react to a pilot's command. The stabilizer and rudder are as big as barn doors and are without any power assists. A pilot can almost wear out his shoes jamming down on the rudder pedals for turns. One wheel on his right controls the elevators for ascents and descents. Also, the pilot can inflate or deflate the fore and aft ballonets (air cells) with air (which is denser than helium) to trim the ship during flight. For descending, the pilot inflates the fore ballonet with air and deflates the aft ballonet. For ascending, the pilot does the exact opposite. Helium, at 15 cents per cubic foot, is too expensive to just valve off into the air. For fuel economy a blimp has no rivals: One blimp flying eight hours a day for one week burns less fuel than a big jet airliner taxiing from the ramp to the runway — in short, a jet airliner gulps while a blimp sips.

Typically, while most Goodyear blimps fly eight hours or approximately 300 air miles a day, they have an aerial flight endurance of 24 hours (depending on the number of passengers and payload).

Landing

Watching the Goodyear blimp *Enterprise* land recently at the Ann Arbor Airport was disconsertingly mesmerizing. While the *Enterprise* slowly hovered, the ground crewmen took their positions to grab the lines trailing down from the giant ship. A pilot must land a blimp directly into the wind. Sideways drift can be agonizingly difficult for the ground crew, and crosswinds or gusts can roll a blimp. The Crew Chief held the orange wind sock high so the pilot could see the wind direction. Ideally, a 10-mph wind allows just enough air to flow over the control surfaces. If the helium is heated and most of the fuel is burned, a blimp can be difficult to land. In this situation, the pilot flies toward the ground with the throttles wide open. The ground crew then quickly adds enough ballast to keep the ship down.

As the pilot maneuvered the *Enterprise* in low, the ground crew grabbed the lines and walked the big ship to the portable mooring mast up which a ground crewman clambered like a squirrel. This is the moment of truth! As the *Enterprise* was pulled to the mast, the crewman atop the mast locked the ship's hitching ball on to the mooring mast, much like a trailer hitch. On the blimp's skin

are reinforcement strips radiating back, which are called battens, and these absorb the strain when the wind sways the ship around while connected to the mooring mast. If a blimp would break free of the mast (and that's very seldom), a rope connected from the mast to a 22-ft. long rip panel in the ship's envelope will rip open the helium envelope and it will quickly deflate.

After the *Enterprise* landed, its helium pressure was checked hourly. Every day helium purity is checked, too. Auxiliary motors are put on the ballonets to assure proper envelope pressure as the helium cools and contracts during the nighttime hours. A crewman always stays with the blimp.

Today's Scientific Giants

Blimps have served science in several unique capacities. Goodyear's *Columbia* assisted the American Cetacean Society in counting migrating gray whales off the California coast. Other uses included pollution, urban, and transportation studies. One experiment was to test aerodynamic qualities of test vehicles hung beneath the blimp acting as a flying wind tunnel devoid of the confusing side effects of a static wind tunnel. At Edwards Air Force Base, a blimp hovered at 2,000 feet while jets flew past at supersonic speeds, aiming shock waves at measuring instruments aboard the blimp.

Even Hollywood has used blimps in films. Goodyear blimps were used in *Nashville, Once Is Not Enough, Black Sunday, Help, Two Minute Warning*, and *A Star Is Born* to mention a few.

What Of The Future?

Future uses of the blimp have hardly diminished. Britain's Airship Industries is undergoing experimental studies of the military applications of blimps. While they are using the same gondola designs and airship construction of 50 years ago, they are testing new concepts such as the use of Kevlar fibers for cables, Fiberian plastics, polyester envelope fabrics (to resist ultra-violet embrittlement caused by sunlight), lightweight materials, and modern avionics. Airship Industries' *Skyship 600*, a cooperative venture with Westinghouse and Ferranti, is a prototype used for advanced early warning, anti-submarine warfare, offshore patrolling, carrying assault boats for commando-type raids, and mine countermeasures. Of course, vulnerability to enemy attack by aircraft, surface vessels and weather are important questions to consider here.

Powered by twin Porsche 204 hp and 270 hp engines respectively, the *Airship 600* has ducted propellers which produce vectored thrusts from 90 degrees upward to 120 degrees downward. It has a load capacity of 5,511 lbs. and cruises at 60 mph. Radar systems tested aboard the *Airship 600* have included the Omega, ADF, VOR/ILS, MEL radar surveillance, IR surveillance, and camera surveillance.

In January of 1980, the Federal Government awarded a contract to the Piasecki Aircraft Corporation to build the *Heli-Stat*, a blimp powered by four helicopter engines. Its purpose was to provide transport for heavy loads such as timber from inaccessible areas, and thus avoid expensive road building. This airship was 10 stories high, 343 ft. long, and could lift a payload of 10 tons. On July 1, 1986, the *Heli-Stat* caught fire and crashed during a test flight at Lakehurst, New Jersey, near the site where the *Hindenburg* crashed. No plans have yet been announced to renew the Heli-Stat program.

A 70 foot one-person blimp is being produced by Pacific Airships of Sunnyvale, California (a distributor for Memphis Airships). This will retail for $15,000. How many will be built and sold will depend on the market demand.

It's a shame we cannot revive the glory days of passenger airships of the 1920s and 1930s. While it is technically possible to build craft similar to the giants of fifty years ago, it is not economically feasible, when the public demand for speed, aircraft density and airport facilities are considered. But one unarguable fact can be stated: "Nobody doesn't like a blimp!"

Maj. R. Raymond - Barker, C.O. of No. 3 Squadron, RAF, was the last man killed by Von Richthofen on April 20, 1918.

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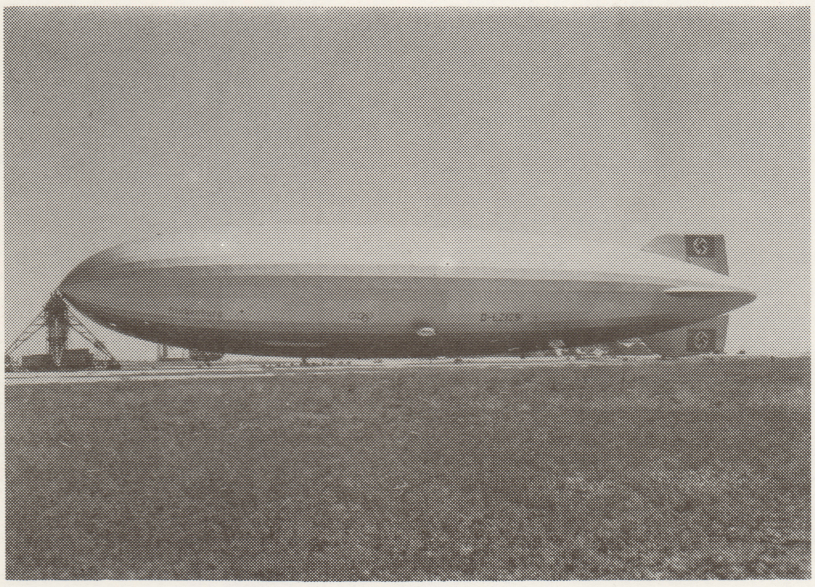
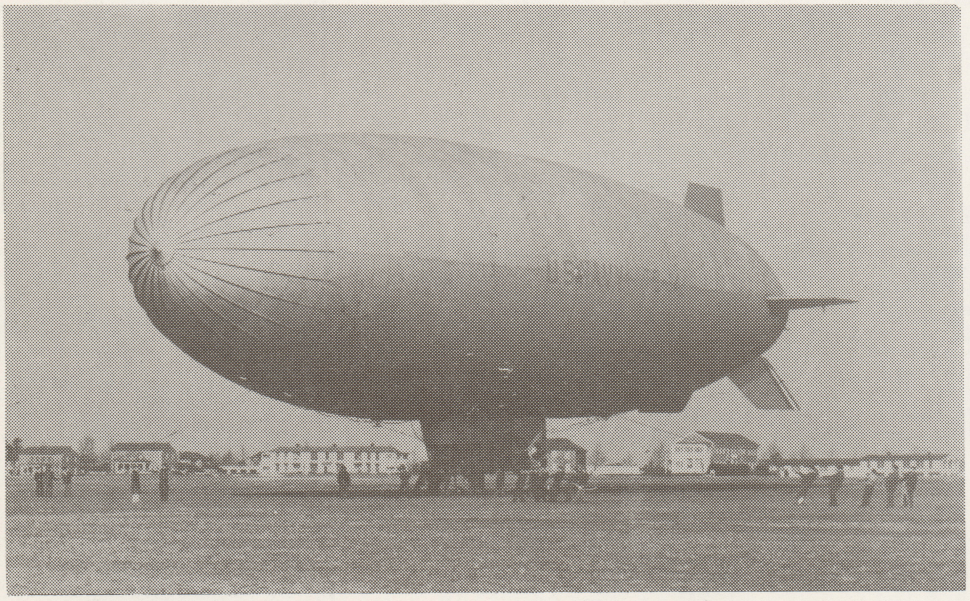
THE PHOTO SECTION



The German airship *Hindenburg* on a portable mast at Lakehurst. The five interlocking rings of the 1936 Olympics can be seen on the side. (USN)

The ZMC-2 was completed on Gro
metal clad airship in the world. It
for ten years. (USN)



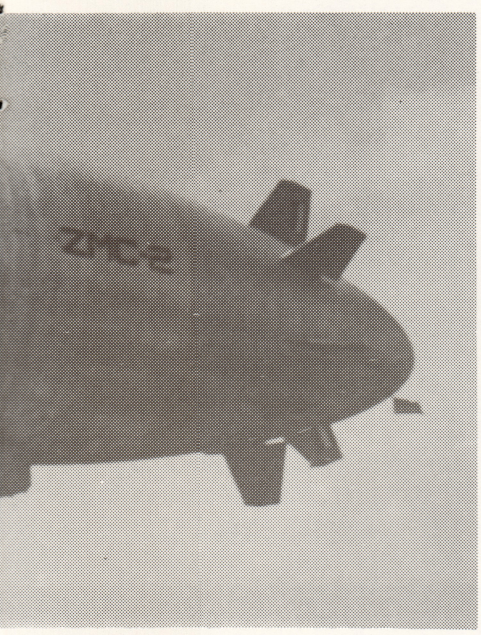
The TC-14 was originally a U.S. Army ship, which was transferred to the Navy when the Army terminated its airship program in 1937. It had a crew of eight and a "cloud car" in which an observer could be lowered 1,000 feet below the ship for observation below the clouds. (USN)

Three K-series blimps in a
the K-series was the larg
WWII. The crew was three o

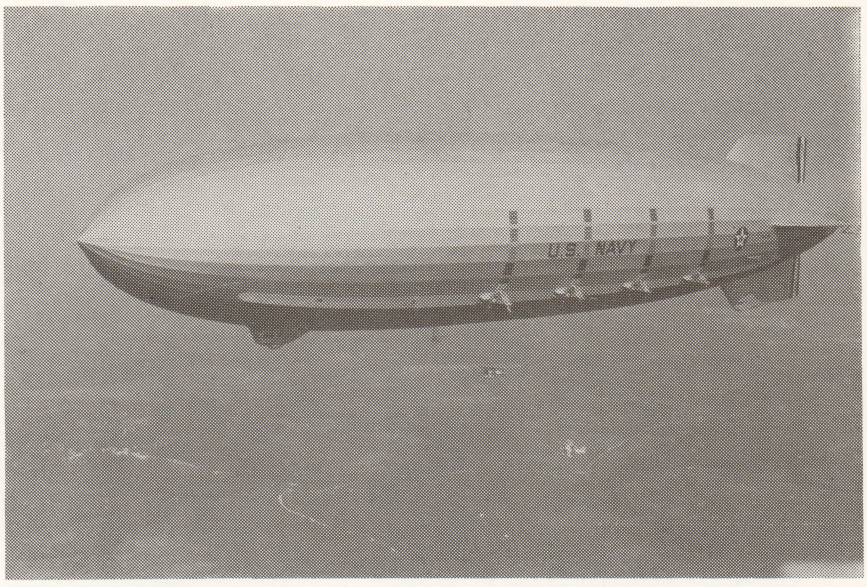
"The First Giants in the American Skies"

by Jim Hanford

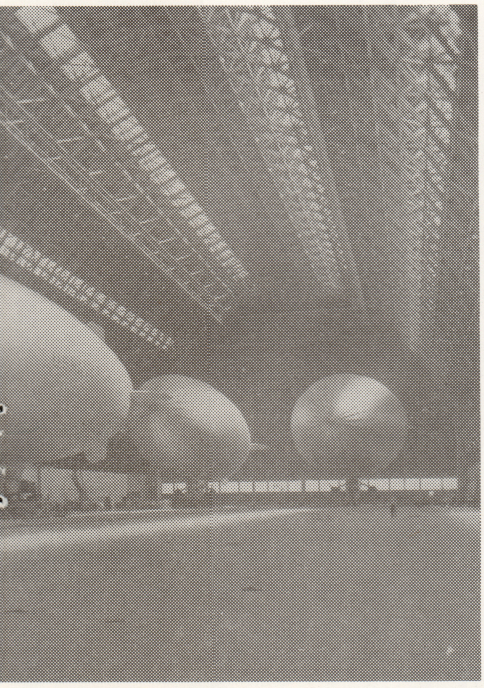
Although the advent of long range aircraft spelled the end of the huge airships, they made their mark in the skies over the United States some 60 years ago. The photos below are from the album of member **Charlie Lingenfelter**, who served with a Navy blimp squadron at Lakehurst, NJ in the late 1940's.



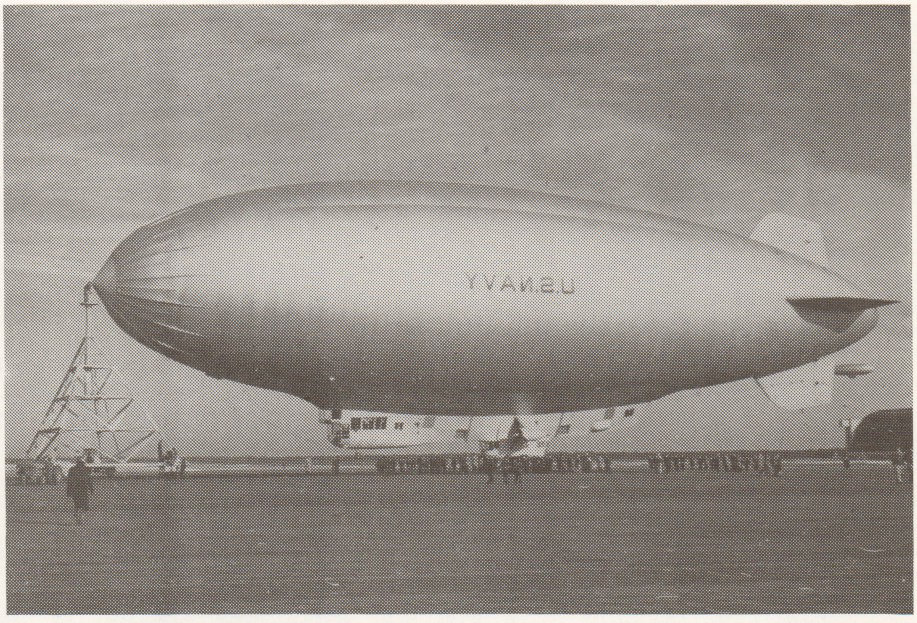
osse Ile in 1929, and was the only carried a three man crew, and served



U.S. Navy airship Macon in flight escorted by Curtiss Sparrowhawk fighters. Macon was built in 1933 by Goodyear - Zeppelin and crashed two years later at sea off Point Star. (USN)



hangar at Lakehurst. At 135 ships, gest class, and saw extensive use in fficers and nine enlisted. (USN)



Only four M-series blimps were delivered in 1944. The 117 ft. long control car was built in three sections to match the flexibility of the envelope. It had a top speed of 75mph. (USN)

BOARD REPORT

Board Resolves Debt Status
By Jim Hanford

At their regular July meeting , the National Board of Governors authorized the following actions to pay off a $50,000 note on the B-17, which was called in on July 1:

Payment of $15,000 with funds raised primarily from the special solicitation letter to members.

The securing of a 48-month bank loan for the remaining $35,000, using the C-47 as collateral.

The Board also continued the existence of the special Debt Retirement Committee, since its expertise will be needed to develop strategies for the following long-term obligations:

A Current $100,000 note on the B-17 has a final "balloon" payment of $29,761 plus interest due on July 24, 1991.

A current $75,000 note on the B-25 has a final "balloon" payment of $22,321 plus interest due on November 19, 1992

A member note for approximately $32,000 is also outstanding and eventually must be repaid.

The Board also reviewed the program of the Institute for Museum Services, inasmuch as both the Willow Run and Northeast Divisions have applied to IMS for a general operations support grant. Based on an IMS review of the Northeast Division Museum, their application was denied. Although the Willow Run review had not been scheduled, there was ample reason to doubt that it would pass either, since so many of the IMS's criteria are known to be lacking. The point of the discussion was that, unless the YAF museums learns and apply the techniques of professional museum operations, they will not be appreciated - financially or otherwise - as museums by museum professionals.

At the August regular meeting the Board voted to accept the donation of a 1982 Ford Escort station wagon. Although the vehicle needs some repairs, it will be more economical to operate for many trips now being made by the van. It is worth emphasizing that all items donated to the Yankee Air Force can only be accepted by the Board of Governors. Individual members may initiate the acceptance of a donation, but always subject to Board approval.

The Board also discussed the overhaul of the highest-time B-17 engine by the Sandberg Company in Minneapolis. This is a prime engine overhaul source, which has a heavy workload. They have estimated the overhaul would be finished in 9-12 months, at a cost of $17-20,000, if the engine is shipped soon and accompanied by a $5,000 deposit. The Board tabled the motion for further study. Director **Walt Hart** reported he has set a goal to have *The Yankee Lady* flying for Memorial Day, 1991.

The efforts to find a buyer for the B-25 have resulted in just a few "nibbles", but no firm offers. The current warbird market is soft, which suggests that the aircraft would not realize even the price that the YAF paid for it.

LETTERS TO

July 17, 1989

Dear Editor:

We always look forward to receiving YANKEE WINGS, and search for articles that particularly interest our organization.

I would like to submit a correction to the article, "Outstanding Woman Pilot" by Mr. Jack Stankrauff, under the heading, Tale Spins, appearing in the March-April issue, Volume 8 Number 2.

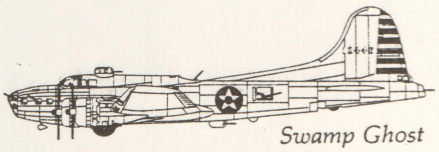
In the second paragraph on page 6, Mr. Stankrauff states that Amelia Earhart was born on July 24, 1898. Her baptism records show she was baptized on October 10, 1897, and lists her birth date as July 24, 1897.

The first paragraph (con't) on page 7, states she married Mr. George Putnam in 1929. Amelia Earhart and George Putnam were married on February 7, 1931, at his mother's home in Noank, Connecticut.

Thank you for your interest in women pilots, and also your articles published about them.

Regards,
Virginia Oualline
Archives, The Ninety-Nines, Inc.

Ed. Note: *The Author's response:* In my Tale Spins column on Amelia Earhart in the March-April, 1989 WINGS issue, the correct birth date of Amelia Earhart should be July 24, 1897 and her correct marriage date should be February 7, 1931. -Jack B. Stankrauff



Swamp Ghost

THE EDITOR

August 10, 1989

Dear Editor:

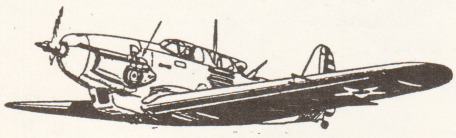
I would like to add my congratulations for the excellent job you and your staff are doing with the Yankee Wings. YAF members should be proud of the professional quality of the Yankee Wings.

The article by Randy Hotton in the May-June issue was of special interest to me as I was a member of the 306th Bomb Group at the time of the events related in the article. Randy did a great job of summarizing a very historical and trying time in the life of the 306th and of its realistic portrayal in the movie "12 O'Clock High".

The history of the 306th and other 8th AF units certainly reflects a lack of leadership and experience in the early days of 1942. The article mentioned that, "Slowly the 306th came to accept the new commander (Col. Frank Armstrong) and improved their performance." Col. Armstrong certainly turned the 306th around, but it took many more months of combat operation to really shape up the group into an efficient and effective fighting unit. The 306th, one of the oldest bomber groups in the 8th AF was in combat operations until the end of the war. It participated in 341 combat missions, (9614 sorties) and was credited with 322 enemy planes shot down.

However, statistics do not tell of the literally thousands of heroic acts performed by the members of the air crews on a routine basis.

Sincerely,
Paul Tardiff



DIVISION NEWS

NORTHEAST DIVISION

Otto Mueller, a division member and former B-29 navigator in the Pacific in World War II, has been instrumental in the YAF's role in the Boonton, NJ efforts to recognize the contributions to aviation by Jimmy Doolittle. It was at the Radio Frequency Laboratories in Boonton Township that the radio direction finder was developed, which provided a homing capability for use in instrument flight, and was the origin of the expression, "on the beam". Doolittle flew a Consolidated NY2 from the RFL airfield to test RDF and other instrument flying procedures, which he demonstrated to the world on September 24, 1929, at Mitchell Field on Long Island.

Only a few months ago it would have been difficult to find anyone in Boonton who knew of Doolittle. Today, as a result of two projects jointly sponsored by the Boonton Township Historical Society and the Northeast Division, virtually everyone in town can discuss, with great pride, Doolittle's accomplishments. The first project was an essay and art contest based on the life of Doolittle for elementary school students. The second project is the sponsorship of an edifice commemorating the airman's activities in Boonton Township, which culminated in his historic first instrument flight. The edifice will enclose a bronze bust of Doolittle by Dr. Martin Sigel. It was dedicated at a site adjacent to the original airfield on September 24, 1989, the 60th anniversary of the first blind flight.

Mueller recently addressed the Union-Morris Chapter of the Air Force Association on Doolittle's life and the joint effort to preserve the township's role in the first instrument flight. The story, and the Northeast Division's contribution, was carried in a three-column story in a Sunday edition of the *Newark Star Ledger*(From the July 1989 *Yankee Clipper*.)

MID-MICHIGAN DIVISION

The Tri-City Airport open house on August 13 saw members of three YAF divisions working together. The MMD ramp crew and the Headquarters C-47 joined Saginaw Valley members to make the day a success. A personal highlight was SV Chairman **Ken Pol's** ride in a P-51. Ken, who has been quite ill recently, was still euphoric about it several days later. We all hope for your continued improvement, Ken.

Another joint program was an MMD security meeting in August attended by security personnel from Willow Run. The participants reviewed the revised Security Manual, uniforms and equipment, and future training. YAF security personnel receive training in CPR, first aid, firefighting, drill and ceremony, legal boundaries, crowd control and traffic control.

WI/IL DIVISION

MMD Chairman **Joe Oberlee** accompanied the C-47 and crew to the Stateline Division Fly-in at Janesville, WI, for another three-division joint effort. He later described the well-maintained airport, and the success of the Pizza Hut mobile unit, which donated their profits for the day to the YAF. Joe was warmly welcomed by those whom he met, and advises members who visit the area to mention at Blackhawk Airways that they are in the YAF, and they'll be well received. (Above paragraphs by **Dennis Garner** in the September 1989 *Wing Tips*.)

RESTORATION NEWS

B-17G

by Don Burke and Earl Hewett

The B-17 restoration is progressing smoothly. The following areas have been receiving the bulk of the attention by the restoration crew in recent months:

Electrical

Dean Greene reports that National Industries is having some problems with their wire supplier concerning the numbering of the wires. National Industries will attempt to number the wires themselves and send us a sample. They will make all 1273 wires which are required and then ship them to us. We'll do the bundling of the wires ourselves. Junction boxes and turbo-charger boxes are being cleaned and repaired. No progress to date on the relays, switches, or fuses.

Windshield

The newly formed windshield frame is back from heat-treat. **Norm Ellickson** and **Charlie Greenwald** have begun to fit the glass to the new frame. The frame may appear a little crude at this stage, but there is quite a bit of fitting and trimming to be done before the inner frame can be fitted to the new frame. A point of interest: the windshield frame including the cost of the pattern/drawings and mold has a value of $7500. The left and right hand windshields have a value of $250 each and were obtained from the folks at Geneseo, NY in exchange for gun mount parts made by Walt Hart.

Waist Gunner

Work continues with the "Left Gunner" position. All the stringers have been installed. **Al Smith**, **Jeff Lockwood** and **John Ward** have been doing a lot of "buzzzzzzzzzing" with the air drill to remove existing rivet heads, and then with a punch and hammer, they knock out the remaining rivet. Then the real fun begins, cutting and fitting the new skin in place. Their efforts can be seen across the upper section of the gunners position where there is *NEW SKIN* with *NEW RIVETS* in place!

Bad News Section

Fred Lockwood reports that cracks have been found near the aft wing spar joint at the fuselage circumferential on both the left and right sides. These cracks were spotted by **Scott Smith**. The drawings needed for this repair have been drawn and the repair has been started by Fred Lockwood and **Frank Modlinski.**

Good News Section

Cracks have also been found under the landing gear trunions. This was at first felt to be a real setback. The problem, however, was not as bad as it first appeared. An inspection indicated that the cracks were old and presented no problem at this time. The repair at this point is to stop-drill the cracks. The area will then be monitored by dye checking for additional cracking.

Radio Operator

The framing of Bulkheads #5 and #6 is progressing nicely and the crew is about to start driving rivets. They will be held up somewhat until the repairs of the spar joint area are completed.

Engines

Grant Schwartz has reported that the donated hoses and fittings from Aeroquip Corporation in Jackson, Michigan are arriving. A special thanks to **Jim and Norma Hainer** and thanks also to **Bill Clevenger** for their efforts in this much needed donation. The only hoses Aeroquip cannot supply are fuel line hoses which they do not make. Grant is also on schedule with his pre-oiling of all four engines. The pre-oiling is a preservation operation. It's accomplished by injecting hot oil into the engine, thereby removing any moisture which may have accumulated since the last pre-oiling operation.

Cleaning

Yes, cleaning is still an on-going activity. Most of you know of the bead blasting and steam cleaning of the fuselage. Guess what? This airplane has *wings* which provide more than shade from the sun and shelter from the rain. They also provide lift for flight! They would be more capable of this primary duty without the added weight of *dirt.* **Ted Edmonds** needs some help cleaning the wing area. Once the wings are clean, they can then be painted and the wiring, hoses and fuel cells installed. So – the dirt has to go, and Ted needs lots of help. Until this happens, the wing stress plates cannot be reinstalled and the airplane stays on jacks.

Bomb Racks

Walt Hart and **Norm Ellickson** made the long awaited trip to California to complete the purchase of the bomb racks. They had negociated a price of $6000 for the racks. Upon arrival, however, they were told that the bomb racks were not for sale. It seems that the owners now wish to sell the racks as part of a package which includes items such as the bomb racks, bomb bay doors, jackscrews, shackles, etc. The price - $20,000!

There is a line in a song which goes - "Where have all the people gone"? Recently a picture of a now-named *Yankee Lady* and her "crew" taken shortly after her arrival was found in the B-17 parts room. You can hardly see the plane for the "crew". Where have you all gone? Come back, we and she can sure use you!

"GOTTA BE DONE IN '91"

YAF Museum To Lose F7F-3N

"Tigercat"

Information has been received from the USMC Museum in Quantico, VA, that the F7F-3N "Tigercat" has been traded and will be departing the Yankee Air Museum within the next 3-4 months. Information was not given on who the aircraft was traded to or what the USMC received in return for the F7F-3N. The officer-in-charge of the USMC related that the trade had been in the making for 2-3 months. The Yankee Air Force will not be billed for transportation of the aircraft to its next destination, nor will we receive any reimbursement for monies spent transporting the F7F-3N to Willow Run Airport. *(From Hangar Happenin's)*

Privateer/PB4Y-2

By Al. Scotford

This last month has seen some more of the continuing work on the skin, electrical system, the plexiglas for the nose and side windows and also, the controls of the Privateer.

Ken Brown has been working on some of the wing lights and they are now wired and ready to function. **Lee Peterson** and **Bob Morningstar** have been working on the plexiglas for not only the side windows but also the nose section. **Norm Schroeder** has removed the bent sheet metal and stringers from the side of the bomb bay and is making progress with the repairs to that area. **Joe Reinman** and **Jim Quiggens** and others are working on the controls and are still trying to rebuild or repair the various pulleys and pulley supports. We are still gathering parts for the hydraulic system and someday soon hope to have that working again. *(From Hangar Happenin's)*

Pembroke

By Bob Fenner

Even with our many activities this month, the Pembroke crew still found time to continue with its work. We are still awaiting arrival of the tires. **Fred** has undertaken the project of revitalizing the seats, either by cleaning or rebuilding as required. **Wes** and a new member **Gene** are constructing the radar operator seat from scratch. With this, all flight crew seating will be installed.

Hank has volunteered to help with interior work, and the main cabin curtains. For those who have seen the A/C, the cabin curtains are deteriorated from old age.

Dennis Golderer has spent countless hours preparing the area astern of the cockpit for refurbishing. This area, running the full girth of the plane, is where the cockpit butts to the main cabin, and is the only part of the aircraft that is fabric. After it is prepared and primed, he and **Pete** will complete the job.

John Goderer and I cleaned and repainted the unfinished national markings. **Bill Force** had started doing this some time ago and did a magnificent job. His expertise is beyond question.. Look at the Indian figurehead for example. Bill is now the Chairman of the new "Atlantic Coast Division", works for the FAA, and is involved with the Millville P-47 Museum.

Dave MacMillin donated a pair of large metal chocks for a large aircraft - a Connie we think. On Sunday, **Bob Macagna** and **Kim** refurbished them, and they are looking good.

Although we are showing progress, there is still a great deal to be done. If any of the members feel in the mood to help, please come on down. There is always someone here to help you to help us.

Our goal is to make the Pembroke as sharp as possible on a limited budget. We repair parts instead of replacing them, which takes more time but less funds. In the next few weeks I hope to have more progress to report.

Keep 'em flying.

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Baron Manfred von Richthofen

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MEMBERSHIP REPORT

By Charlie Lingenfelter

We have had a very good influx of new members (99) since my last membership report in the July-August issue of *Yankee Wings.* Total Membership as of September 2, 1989 stands at (1440).

Please welcome the following new members and help to acquaint them with our organization:

Willow Run - 3323 Douglas R. Young, 3324 Michael Salois, 3327 Jack W. Peters, 3328 Terrence E. Thompson, 3329 Lynette Morningstar, 3330 Russell D. Welch, 3333 Mike Miller, 3334 Robert Hart, 3336 Jason Vosburgh, 3337 Henry T. Kasprowicz, 3338 Michael A. Choma, 3339 Joseph McKenny, 3340 Leo Bollei, 3341 Alan J. Eaton, 3342 George Rumbaugh, 3343 Mike A. Starwas, 3344 Adam P. Banner, 3347 Richard H. Szurek, 3349 John P. Gillespie, 3350 Louis Boynton, 3351 William E. Bates, 3352 Thomas H. Perks, 3353 Ian J.C. Scott, 3354 Mark P. Mahoney, 3355 Leonard W. Clarkston, 3356 David M. Thomson, 3357 Ronald Nowicki, 3358 Allen F. Vollmer, 3359 William J. Davis Jr., 3361 Padraic I. Mullin, 3362 Jim Bahr, 3363 Richard E. Mohrlock Sr., 3364 Stephen H. Piontek, 3365 Peggy Piontek, 3367 Patrick Graham,3368 Dale W. Behler, 3369 Donald N. Parker, 3370 Richard C. Easterbrook, 3371 David M. Johnson, 3372 James S. Bonadeo, 3374 Joanna Said-Odegaard, 3375 Richard Robbins, 3376 Gerry Kaleniecki, 3377 James N. Gibson, 3378 Cynthia S. Bieniek, 3379 Kenneth A. Ausland, 3380 William J. Phillips, 3381 Frank Martineau, 3382 Jon Berghoff, 3383 Don Selover, 3384 John A. Miller, 3385 Joseph W. Sprys, 3386 Henry R. Szurek, 3387 Donald R. Farmer, 3388 William Miller, 3392 Helen E. Hawkins, 3393 Ronald Tyrl, 3394 Harvey E. Seymour, 3395 David T. Highland, 3398 Chris Woodward, 3399 Donald G. Luke, 3404 James R. Fowler, 3405 Cyril E. Lambert, 3406 Kelly M. Obriot, 3407 Willard J. Rouhselang, 3408 Bruce Blossom, 3409 Bruce B. Vida, 3410 Alvil B. Killeen, 3411 Deanna Linda Terentiak, 3412 Carl Schmidt, 3413 Eddy L. Likes, 3414 Gertrude E. Kerentoff, 3415 Thomas A. Curaba, 3417 Bruno Escaler, 3420 Charlie Ford, and 3421 Richard R. Bauer.

Northeast - 3325 Fred Plumb, 3326 Herman J. Koehler III, 3331 Peter BarBieri, 3332 William C. Springer, 3345 Jackie Patel, 3366 Andy Bencsko, 3400 Jim Robson, 3401 Joseph E. Grob, 3402 Michael A. Russo and 3403 Stan Breman.

Wisconsin/Illinois - 3389 Alfonso E. Lamendola, 3390 Terry Sheafor, 3391 Robert C. Hansen, 3418 Gary L. Overboe and 3419 Randy Lee Anderson.

Saginaw Valley - 3335 Raymond Shelby, 3346 Marshall McGrath, 3396 Joseph E. Moose and 3397 Lee Evans.

Mid-Michigan - 3348 Paul C. Guiett, 3360 Stan Wojes and 3373 Eugene J. Pastori.

Atlantic Coast - 3416 Frank L. Smith.

NOTICE

You must renew your membership on time. This is the same month in which you joined the Yankee Air Force.

Sufficient notice (two months) of the expiration date is mailed to all members on a membership renewal form and a self-addressed envelope is included.

An additional (30) day grace period is allowed for the return of the dues payment. *Failure to renew* by the end of the grace period will result in your name being *removed from the active membership roll and you lose all your rights, privileges and membership number.*

Please be prompt with your renewals to allow us to maintain accurate records and keep your status in the Yankee Air Force current.

Thank you for your cooperation.

How To Save Some Money

Change your membership class to "LIFETIME". A considerable savings can be realized if you upgrade your membership to one of the following:

LIFETIME - One time payment of $500.

SENIOR LIFETIME - One time payment of $250, if member is 60 years of age or older.

CONDITIONAL LIFETIME - Payments of $25 per month for (24) months for a total of $600. At completion of the contract the member is a full LIFETIME member.

CONDITIONAL SENIOR LIFETIME - Payments of $25 per month for (12) months for a total of $300 for members 60 years of age or older. At completion of the contract the member is a LIFETIME member.

Your membership class may be changed at renewal time.

U. S. Air Force Museum Guest Lecture Series

Thur.	Nov. 16	"Berlin and Back on Two Sticks of Gum" - Col. Gail S. Halvorsen, USAF (Ret)
Wed.	Jan. 17	"History of the Air Commandos" - BGen. Harry C. Aderholt, USAF (Ret)
Thur.	Feb. 15	"Women in the Military" - MGen. Jeanne M. Holm, USAF (Ret)
Tues.	Mar. 20	"Bat 21" - LCol. Iceal Hambleton, USAF (Ret)
Wed.	Apr. 18	"From Berlin to Hanoi" - BGen. Robin Olds, USAF (Ret)

Estate Planning For Yankee Air Force Members

By Ray Hunter
Executive Director

Whether we like to think about it or not, one of these days, we'll all be playing the "harp solo," going to the Great Beyond, or whatever euphemism we choose to describe the fact that our time to do the things we enjoy is finite. Folks, we ain't gonna be here forever! This should prompt us to try and do our very best to see that those people we leave behind are provided for and that the resources we worked long and hard for are protected as best they can be. I recently attended a seminar on estate planning. The following items should be of interest to YAF members.

The basic instrument for estate planning is a will. The will does many things, some of which are:

1. To provide for your spouse, your children, and to name guardians.
2. To decide on distribution of personal effects and other property.
3. To reduce or eliminate federal estate tax, and to protect accumulated assets.
4. To provide for charitable or non-profit organizations.

As a part of your will, you may also have a trust. A trust can:

1. Provide longer term, professional administration of assets for spouse, children, and charitable or non-profit organizations.
2. Provide for estate tax planning, act as a probate avoidance technique, and provide benefits not only after your death, but during your life.

What does all this have to do with the Yankee Air Force? I'm sure that there are many of you who would consider leaving the Yankee Air Force a gift. There are many types of planned gifts for the Yankee Air Force. They are:

1. Gifts by will or trust.
2. A charitable gift annuity.
3. Charitable remainder trust.
4. Pooled income fund.
5. Retained life estate in a personal residence or farm with a gift of the remainder interest.
6. Gift of life insurance.
7. A charitable lead trust.

How do you get started? The first step is to sit down and list those people and organizations which are important to you such as your spouse, children, relatives, church, and non-profit, charitable organizations. Then prepare a list of your assets, decide who you want to be your trustee, and most important — make an appointment with your attorney.

If you wish to leave property to the Yankee Air Force, the following will bequest language is suggested: "I give, devise and bequeath to the Yankee Air Force, a Michigan not-for-profit corporation, the sum of_____dollars ($_____) to be used for the benefit of said corporation in such manner as the Board of Governors thereof may direct."

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USAFM LECTURE SERIES

The US Air Force Museum has announce its 1989-90 guest lecture series, which brings noteable aviation speakers to the museum. All lectures will be held in the museum theater, which seats 500. They are free, and reservations are not required, however they are frequently filled. The lecture begins at 7:30pm, and the museum opens at 6:30pm. The gift shop is open between 6:30 and 7:30. The schedule is shown in the box on page 16.

Col. Halvorsen flew in the Berlin Airlift, and has described his experiences on television. He earned the nicknames, "Candy Bomber" and "Uncle Wiggly Wings", because he and his crew dropped candy-laden handkerchief parachutes to children in Berlin. BGen. Aderholt, who served in WWII, Korea and Vietnam, will discuss the utilization and accomplishments of the Air Commandos in Southeast Asia.

MGen. Holm, the first woman Major General in the U.S. Armed Forces, will speak on the events and decisions to vastly expand women's participation in the nation's defense. LCol. Hambleton, the subject of the book, Bat 21, was shot down in Vietnam and faced twelve days of pain, infection, leeches, exhaustion, starvation and hand-to-hand combat before his amazing rescue. The series will close with triple-ace BGen. Olds, who scored twelve victories in WWII and four more in Southeast Asia. Olds will discuss the development of the fighter ace from the 1940's through the 1970's.

YANKEE AIR FORCE

MUSEUMOLOGY

by Brian Rogers

The World War I Room

The first exhibit room one encounters after climbing the stairs to Yankee Air Museum's second floor exhibition area is the World War I Room, which contains memorabilia from the First World War, the 1920's and the 1930's. The items on display were assembled by the late **Don Richter.** Richter, who passed away in 1987, "knew 'em all," says museum director **Bill Lary** of Richter's knowledge of World War I aircraft.

Dominating the wall to the right of the room's entrance is a painting of a World War I air battle scene by YAF member **Jack B. Stankrauff.** Stankrauff painted the picture during the winter of 1982-83, using as his canvas a piece of particle board from the original construction of the hangar housing the Yankee Air Museum. Lary observed much of Stankrauff's work on the picture and says there were times that winter when it was so cold in the hangar that paint froze to the board as the artist worked.

Sharing the wall with Stankrauff's painting is a framed page from the *New York Tribune Magazine* of Sunday, January 26, 1919. The headline topping the page reads,"Who Is To Be Columbus Of The Air And When?" In the center of the page, just below the headline is an entry blank for the Daily Mail contest offering 10,000 British pounds to the first aviator to traverse the Atlantic. To the left of the entry blank is an article by Augustus Post, Secretary of the Aero Club of America. The headline over Post's article proclaims,"Bets Being Made That Atlantic Will Be Crossed In The Air This Summer From Either Side." Another article on the page is by Harry E. Tudor; its headline reads: "Hoisting Passenger Train Into Sky — Trunk Lines Are Definitely Planned For Early Operation." A humorous item at the bottom of the page is headed,"Wait Till They Put Wings On Everybody's Flivver", and is illustrated with a picture of a traffic cop dangling from a parachute, giving stop and go signals to airplanes.

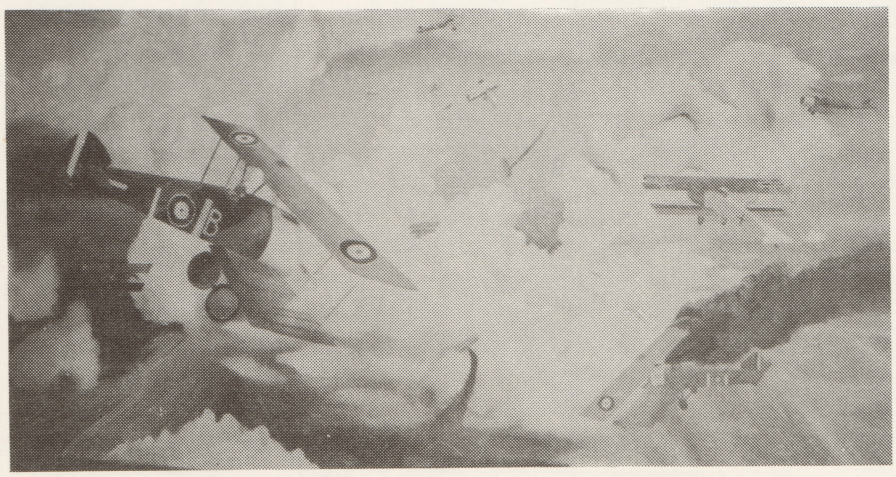
A very personal touch is added to the World War I Room by the display of belongings of Private Leo M. Wilt, who served in Company A of the 131st Engineers. Included are Wilt's discharge recorded May 6, 1921 in Morrow County, Ohio, along with a pay record, his dogtag, and a pocket-sized Bible. Wilt's relatives in Ypsilanti donated the items to Yankee Air Museum.

Yet another memento is a very early aircraft radio receiving set. Manufactured by Western Electric, the set was donated by Elmer Spencer.

There's a fur-lined World War I era flight suit complete with fur-lined goggles and mouth cover.

Prominent along the wall to the left of the door is a replica of a World War I battle trench including weapons, sandbags, helmets, and canteens.

Space doesn't allow a more extensive coverage, but most readers could probably spend hours investigating the displays in the museum, beginning with the World War I Room.



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ANNUAL AWARDS ANNOUNCED AT FOUNDER'S DAY

Bodycomb Is National Airman of the Year

The YAF national and divisional Airman of the Year awards were presented by President **Russ Maxwell** at the Annual Meeting, September 16, 1989. Also presented were awards for Volunteer of the Year, YAF Spirit, Recognition of Special Skills, and the National Helping Hand Award, all of which are new categories this year. Each division was encouraged to make nominations, but only three divisions responded.

The National Airman of the Year Award went to **Richard Bodycomb** of the Willow Run Division. Bodycomb is the YAF Director of Flight Operations and a retired Air Force General. Saginaw Valley nominated member Dave Schneider, an air show announcer. The crew of United Airlines Flight 232, who guided their aircraft to a landing at Sioux City, Iowa, after an engine explosion severed the hydraulic control lines, was nominated by the Mid-Michigan Division.

The Volunteer of the Year Award recognizes a member who typifies the ideal volunteer. This person has shown a dedication to the goals of the Yankee Air Force by not only being willing to help, but also by going beyond that by serving in any capacity. This person has been tireless in his efforts, likely to the point of personal sacrifice. His only true reward has been to play a major part in the success of the organization. The recipients are:

MMD-**Sharon Wright**
SV-**George Brown Jr.**
WR-**Barb Sutton**

The Recognition of Special Skills Award is presented to a member who has extensively donated his technical or special skills to the significant benefit of YAF projects and has served to advance the YAF towards its goals. This year's awardees are:

MMD-**Jerry Fantini**
SV-**Truman (Cy) Thompson**
WR-**Charles Greenwald**

The YAF Spirit Award goes to a member who exhibits YAF spirit by taking pride in all that he does, is enthusiastic, strives for top quality, and demonstrates a positive attitude no matter how tough it gets. The recipients are:

MMD-**Joseph Oberlee**
SV-**Kenneth Pol**
WR-**Leroy Bassett**

The National Helping Hand Award is presented to organizations which have significantly advanced the preservation of aviation history through their support of and/or contributions to the Yankee Air Force. The first recipient is the **Selfridge Air National Guard Base**, Mt. Clemens, Michigan.

(continued from page 4)

Fokker D-VII Specifications*

Dimensions
- Wingspan (Upper Wing) 28' 3 1/2" (8.93 m)
  - (Lower Wing) 22' 10" (6.86 m)
- Length 23 (7.01 m)
- Height 9' 3" (2.82 m)
- Wing Area 217.44 sq. ft. (20.2 sq m)

Weight
- Gross 1,936 lbs. (878 kg)
- Empty 1,540 lbs. (700 kg)

Engine
- Make Mercedes-Daimler D IIIa I-6 or BMW IIIa I-6 Horsepower (Max.)
- • Mercedes-Daimler D IIIa 180 HP @ 3,280 ft. (1,000 m)
- • BMW IIIa 185 HP

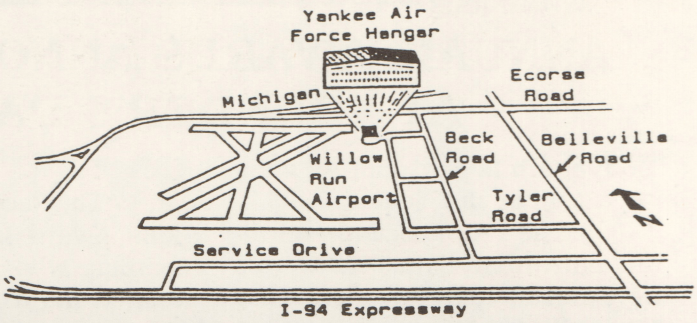
Fuel Capacity 25.1 U.S. Gal. (95 L)
Top Speed 116 (187 km/h) @ 3,280 ft. (1,000 m)
Service Ceiling 19,600 ft. (5,,975 m)
Time to Climb
- To 3,280 ft. (1,000 m) 3.6 min.
- To 13,125 ft. (4,000 m) 18.5

Armament
- 2 Maximum "Spandau" 7.92 mm (0.31 in.) air cooled light machine guns, 500 rounds each gun.

* There have been many conflicting specifications published for the Fokker D-VII. I have used those from sources I consider most reliable.

YAF HEADQUARTERS - WILLOW RUN AIRPORT

Take I-94 to Belleville Road exit, North to Tyler Road, west to Beck Road, turn right and enter through second gate on your left. Or take I-275 to exit 20 - Ecorse Road. Take Ecorse Road west to Beck, proceed south to first gate on your right.



CALENDAR

NOVEMBER 1989

1 - Headquarters Division General Membership (WR)
1 - Northeast Division Council - 7:00 (NE)
2 - Wisconsin/Illinois Division General Membership (WI/IL)
4 - Security Committee - 10:00 (WR)
4 - Restoration Crew - 2:00 (WR)
14 - Saginaw Valley Division Council (SV)
14 - Membership Staff (WR)
15 - B-17 Crew (WR)
15 - Mid-Michigan Division General Membership (MM)
15 - National Board of Governors (WR)
15 - Northeast Division General Membership - 7:00 (NE)
16 - Publication Staff (WR)
21 - Saginaw Valley Division General Membership (SV)
28 - Wisconsin/Illinois Division Council - 7:00 (WI.IL)
29 - Mid-Michigan Division Council (MM)

DECEMBER 1989

6 - Headquarters Division General Membership (WR)
6 - Northeast Division Council - 7:00 (NE)
7 - Wisconsin/Illinois Division General Membership (WI/IL)
9 - Security Committee - 10:00 (WR)
9 - Static Restoration Crews - 2:00 (WR)
12 - Saginaw Valley Division Council (SV)
12 - Membership Staff (WR)
13 - B-17 Crew (WR)
13 - Mid-Michigan General Membership (MM)
19 - Saginaw Valley Division General Membership (SV)
20 - National Board of Governors (WR)
20 - Northeast Division General Membership - 7:00 (NE)
21 - Publications Staff (WR)
26 - Wisconsin/Illinois Division Council - 7:00 (WI/IL)
27 - Mid-Michigan Division Council (MM)

NOTES:

- All meetings begin at 7:30pm, unless otherwise noted.
- An entry marked with an asterisk (*) indicates more information may be found elsewhere in this issue.
- Any additions or corrections to the calendar should be submitted to Jim Hanford, Tel. (313) 562-3283, by the copy deadline shown on page 2.

YANKEE AIR FORCE
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